

11
19980823H1 - FDR

Hurricane 1998 Hurricane Bonnie

Flight #4 980823H

<u>Sensor or system</u>	<u>Number or Name</u>
INE	2
Accelerometer	2
Temperature Probe	2
Dew Point Probe	1
Altitude (for vertical wind)	RA-159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2989.CON

Notes:

Radar altimeter (RA159) had a spike at takeoff (1736:00-1739:14) and was replaced by RA232. RA159 was replaced by RA232 + 14.0 from 1754:15-1754:50. There were three spikes in RA159 during the flight, all of these spikes were removed and patched (1936:00-1936:30, 2013:00-2013:30 and 2119:30-2120:00). RA159 had a spike at landing and was set to zero 0255:28-0258:00.

Dewpoint (DW1) had a spike due to balancing (1811:00-1815:20). The spike was removed and patched. Dewpoint (DW1) exceeded ambient temperature (AT2) several times due to heavy precipitation (1930:00-2200:00).

Dynamic slip pressure (DBP) had problems due to possible leak in the line. DBP was replaced by the dynamic pressure on the fuselage (PQF1) with an offset of +4.7 (1913:39-2207:18).

	<u>Takeoff</u>	<u>Landing</u>
Aircraft static pressure	1009.2	1012.8
Corrected tower pressure	1013.2	1013.2

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

Flight Meteorologist: Stan Czyzyk, (813) 828-3310 ext. 3086

980823H

TIME	LAT	lon	TK	HD	TA	TO	WD	WS	PA	CA	PS	ST	REMARKS
181410	1947	6501	358	01	-3.6	-27.6	125	10.7	5492	5834	505.6	1012.4	LEVEL 18K
183010	2100	6503	283	283	-4.5	-21.0	126	5.7	5490	5833	505.7	1011.5	DROP #1
185944	2132	6730	280	277	-4.8	-21.6	190	16.7	5489	5822	505.9	1010.5	DROP #2
193156	2202	7002	337	331	-4.4	-5.6	222	34.6	5488	5719	505.9	1007.6	DROP #3
194210	2245	7025											LEVEL 18K RA
195851	2357	7058											1st RAINBOW
200712	2423	7126											DROP #4
200820	2424	7127											DROP #5 BAN
200826													BT
201310													DROP #6 BAN
202208													BT
202209	2511	7219											DROP #7
204248	2424	7201											BT
204442	2430	7253											DROP #8
204552	2434	7149											BT
204733	2438	7144											DROP #9
205057	2451	7131											EYEWALL DROP #10
205141	2453	7128											DROP #11
205222	2455	7121											BT
205754	2520	7115											DROP #12
210552	2526	7146											DROP #13
210830	2515	7146											DROP #14
211304	2454	7146											DROP #15
211317	2753	7146											DROP #16
211939													BT
212055	2417	7146											NO DROP #17
212106	2410	7146											BAN DROP #17
212306	2408	7146											BT
212753	2354	7139											DROP #18
214124	2448	7056											DROP #19
214814	2446	7130											IN RAINBOW DROP #20
214852	2445	7132											BT DROP #21
215145	2447	7149											DROP #22
203011	2444	7246											DROP #23 E4
20425	2445	7251											DROP #24
20540													DROP #25
203100	2456	7500	181	181	-6.5	-11.9	6	38.0	6100	6454	465.3	1001.7	CLIMB DROP #26 FL20
204633	2330	7459	182	183	-7.4	-8.6	352	32.9	6103	6461	465.1	1004.5	DROP #27
20344	2203	7504	218	299	-6.2	-23.7	309	14.9	6101	6466	465.3	1007.9	DROP #28
203105	2306	7706	296	298	-6.8	-21.6	356	15.5	6102	6477	465.3	1005.6	DROP #29
2035640	2402	7904	268	270	-11.8	-27.2	47	12.3	6707	7139	427.8	1008.3	DROP #30
205030	2405	8407	270	266	-11.3	-34.1	167	16.8	6721	7153	426.9	1007.6	DROP #31
10853	2439	8546	287	284	-11.6	-37.6	164	12.9	6721	7155	427.0	1009.1	DROP #32
12846	2503	8730	1	1	-12.3	-29.6	171	6.1	6722	7148	427.0	1010.4	DROP #33
15745	2732	8725	78	78	-12.2	-16.1	262	7.5	6720	7152	427.0	1008.4	DROP #34
22240	2756	8456	85	87	-15.0	-21.9	237	19.1	7029	7487	408.9	1012.9	DROP #35 FL23

U.S. DEPT. COMM./NORR/OAO - DATA SECTION WORK FORM NO.1 OAOWF1 FILE

FLT ID: 980823H	FM: TISX	TO: KMCF
FLT NO: 98-069	DLK IN: 0305Z	ATA: 0256Z
ETD: 1730Z	DLK OUT: 1727Z	RTD: 1739Z
ETE: 0300Z	BLK TIME: 9:38	FLT TIME: 9:25 9:4
SPONSOR ORG: HRO	PROGRAM: HURR RESEARCH	PURPOSE: SYNOPSIS FLOW

OAO PERSONNEL

AC PHILLIPSBORN, R ✓	SYS ENG MCMILLAN, S
CP TACCAIT, B / OMARA, T ✓	DATA SYS
NAV RATHBUN, D ✓	RADAR BARR, J
FE TORREY, R ✓	DT/ODW DELGADO, J
RADIO ROGERS, M ✓	CLD PHYS MCFADDEN, J ✓
FD CZYZYK, S ✓	DOPPLER CURRY, J ✓

PARTICIPATING SCIENTIST/VISITORS/OAO

LAST, FIRST NAME	ACTIVITY ON A/C	AFFILIATION
MARKS, F -	PI	HRO
BLACK, P -	SCIENTIST	"
BLACK, M -	"	"
LEIGHTON, P -	"	"
STONE, J -	"	"
BRACKEN, E	"	"

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

LINE 1 POSITION IS NO GONE.

1817:22 BALANCE DW#1

2 BAD BTs

6 2012Z

CHANNEL 3 ON AVAPS NO GOOD

6 2047Z 956 MB

6 2116Z

6 2151Z

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OROWF2

FLT ID: 980823H

TIME OFF: 1739Z

TIME ON: 0256Z

	A/C T/O	WX STN	A/C LAND	WX STN
PRESSURE		29.92	1012.8	29.92

NO DATA DISPOSITION/DATE/QUALITY

1/SEC FLT LVL TAPES	2	
FAST FLT LVL TAPES		
RADAR TAPES		
DOPPLER TAPES		
ODW CASSETTES		
HARD COPIES	1	
AXBT	8	
AXCP		
ODW		
G.P.S	35	

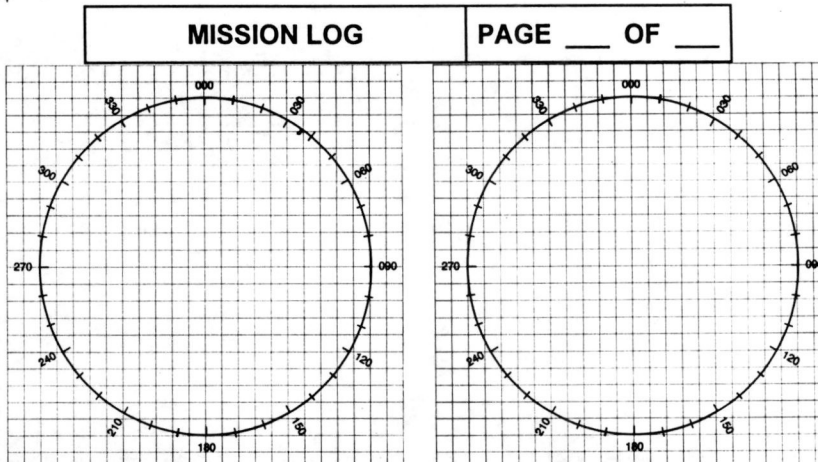
PHOTOGRAPHY

	FWD	LS	RS	VERT
ON				
OFF				
RATE				

REMARKS

7124 7148 NASA 817 NASA 800

CLEARANCES			
FREQ	ALT	HGD	OTHER
		15322	2417N 7138W
			957MB 102KTS
		1850	2436N 7142W
		1925	2433N 7138W
		0020	2452 7143



POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

TRANSMIT TH
FREQUENCY
ANY OF THE F

UHF/VOICE
243.0

MAYDAY, M
THIS IS NO,

- POSITION

- HEADING
- AT
- FLIGHT LI
- WE ARE A
- NATURE C
- ASSISTAN
- PILOT INT
- WE HAVE

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST
1723																		
1729																		
1738																		
		END #1 DATA BAD. WRONG INITIAL POSITION ENTERED. NAV DIDN'T CATCH IT																
1821	FMI	2419.9 6500.6			2420.4 6500.6	-1.5 0			000	2L	358	280	165	43	FL180	237		
1900		2131.5 6729.6	2130.8 6729		2130.8 6729.6	+1.7 0			277	3R	280	284	114	41	FL180	244		
1943		2247.4 7025.1			2247.5 7025.2	-1.1 -1.1			334	10R	344	290	148	76	141K	227		
1959		2356.7 7057.7			2356.0 7057.9	+1.7 -1.2			302	111R	316	259	194	64	141K	232		
2012	S	2439.4 7143.9			2438.1 7144.0	+1.3 -1.1			318	4L	314	297	115	50	151K	241		
2047	S	2439.1 7144.4			2437.8 7144.1	+1.3 +1.3												
2100		2519.6 7113.4			2518.4 7113.6	+1.2 -1.2			284	7R	291	331	125	105	151K	233		
2116	S	2438.9 7145.7			2437.0 7145.9	+1.9 -1.2			187	10L	177	290	313	65	151K	246		
2151	S	2444.7 7145.9			2442.0 7146.4	+2.7 -1.5			276	7L	269	292	055	65	151K	238		
2256		2240.9 7459.2			2237.3 7500.0	+3.6 -1.8			177	3L	174	316	343	67	FL200	250		
2331		2305.6 7705.7			2302.2 7706.5	+3.4 -1.8			298	3L	295	288	097	38	FL200	252		
0002		2405.3 7936.1			2401.8 7937.6	+3.5 -1.5			277	2L	275	315	087	54	FL200	262		
0039		2405.2 8305.1			2400.3 8306.8	+4.9 -1.7			267	1R	268	304	093	48	FL220	256		
0028		2502.5 8729.6			2458.5 8731.4	+4.0 -1.8			002	0	002	308	183	50	FL220	260		

POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
																		END START BLOCK OUT TAKE OFF
TA	BAD	WRONG	INITIAL POSITION ENTERED															NAV DIDN'T CATCH IT IN TIME
		2020.4	-1.5															
		6500.6	0			000	2L	358	280	165	43	FL180	237					
0.8		2130.8	+1.7															
2.9		6729.6	0			277	3R	280	284	114	41	FL180	244					DROP
		2247.5	-1.1															
		7025.2	-1.1			331	10R	344	290	148	76	141K	227					
		2356.0	+1.7															
		7057.9	-1.2			302	14R	316	259	194	64	141K	232					
		2428.1	+1.3															
		7144.0	-1.1			318	4L	314	287	115	50	151K	241					
		2437.8	+1.3															
		7144.1	+1.3															
		2516.4	+1.2															
		7113.6	-1.2			284	7R	291	331	125	105	151K	233					DROP
		2437.0	+1.9															
		7145.9	-1.2			187	10L	177	290	313	65	151K	246					
		2442.0	+2.7															
		7146.4	-1.5			276	7L	269	292	055	65	151K	238					2442.7 7145.9
		2237.3	+2.6															
		7500.0	-1.8			177	3L	174	316	343	67	FL200	250					
		2302.2	+3.4															
		7706.5	-1.8			298	3L	295	288	097	38	FL200	252					DROP
		2401.8	+3.5															
		7937.6	-1.5			277	2L	275	315	087	54	FL220	262					
		2400.2	+4.9															
		8346.8	-1.7			267	1R	268	304	093	48	FL220	256					
		2458.5	+4.0															
		8731.4	-1.8			002	0	002	308	183	50	FL220	260					DROP

PAGE ____ OF ____

FIX TYPES

(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

[illegible]

MISSION PREFLIGHT LOG										NAVIGATOR		AIRCRAFT COMMANDER		FLIGHT DIRECTOR		SCHEDULED / ACTUAL TAKEOFF Z		DATE OF TAKEOFF	
DESTINATION		MISSION																	
TISA → KMCF		5 BONNIE				RATHBUN		PHILIPPSBOAN		CZTZYK				1730Z 1738Z		23 AUG			
WP	LAT / LON	RTE	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	LEG / TOT DIST	LEG / TOT TIME	PROP ETA	ETA	ATA	REMA	
1	1744.1 6442.1												197 140						
2	21 00 65 00												143 342						
3	21 30 67 30	X											143 485						
4	22 00 70 00												163 648						
5	24 00 72 00																		
9	25 00 75 00							310					90 90	+17 +17			2230		
1	23 30 75 00	X											04 180	+17 +34			2304	2303	
2	22 00 75 00												125 305	+24 +58			2328	2330	
3	23 00 77 00	X											125 430	+24 +22			2352	2355	
4	24 00 79 00	unsus											275 705	+53 +15			0045	0049	
5	24 00 84 00		-5 +2										100 805	+19 +34			0104	0108	
6	24 30 85 45	X											100 905	+19 +53			0123	0128	
7	25 00 87 30												150 1055	+29 +27			0152	0155	
8	27 30 87 30												150 1205	+29 +51			0221		
9	27 56.2 84 44.2		-5 +2										85 1290	+16 +07			0237		
1	27 56 83 09							230					35 1325	+08 +15			0245		
2	27 56.0 82 29.6																		

SSION

DATE OF TAKEOFF

~~S. BONNIE~~

RATTSUN

PHILIPPSBORN

CZY ZYK

17307' 17387

73 April 08

WH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	LEG / TOT DIST	LEG / TOT TIME	PROP ETA	ETA	ATA	REMARKS
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INS 1 INS 2

BEGIN ALIGN
TIME

15522 →

ALIGN STATUS (0-5)	0	1	2	3	4	5
0						
1						
2						
3						
4						
5						

①

6

END NAV
TIME

X

03002

START NAV
TIME

17203

DELTA T

X

9740

INS 1 INS 2

DELTA LAT

75.3

DELTA LON

-3.1

RGS

3

RADIAL
ERROR

6

REMARKS

240